





Form PTO-1449		U.S. Department of Commerce Patent and Trademark Office		Atty. Docket No. P24175		Serial No. 10/657,232	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use several sheets if necessary)				Applicant Hiroshi SHINGAI et al.			
				Filing Date September 9, 2003		Group Not Known <b>1756</b>	

  

U.S. PATENT DOCUMENTS									
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE			
<i>m</i>	6 3 8 3	5 9 5	05/07/02	HIROTSUNE et al.					
<i>m</i>	5 9 1 2	1 0 4	06/16/99	HIROTSUNE et al.					
<i>m</i>	5 4 9 8	5 0 7	03/12/96	HANDA et al.					
<i>m</i>	4 4 6 0	6 3 6	07/17/84	WATANABE					
<i>m</i>	6 0 9 6	3 9 9	08/01/00	YOSHINARI et al.					
<i>m</i>	5 5 6 9	5 1 7	10/29/96	TOMINAGA et al.					

  

FOREIGN PATENT DOCUMENTS									
DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO				
<i>m</i> 1 2 6 0	9 7 3	11/27/02	E.P.O.						
<i>m</i> 0 1 1 8 5	4 6 4	11/15/01	W.I.P.O.						
<i>m</i> 1 2 8 1	5 3 7	02/05/03	E.P.O.						
<i>m</i> 1 1 3 2	9 0 4	09/12/01	E.P.O.						
<i>m</i> 1 1 4 3	4 3 2	10/10/01	E.P.O.						
<i>m</i> 2 - 1 6 7	7 9 0	06/28/90	JAPAN						

  

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)									
1	Patent Abstracts of Japan, Vol. 014, No. 424 (M-1024), September 12, 1999.								

  

EXAMINER <i>m/h</i>	DATE CONSIDERED <b>2/3/06</b>
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September 9, 2003Group  
2655 (75)

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EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>ur</i>		4 9 4 7 3 7 2	08/07/90	KOSHINO et al.			
<i>ur</i>		5 0 5 8 0 6 1	10/15/91	KOSHINO et al.			
<i>ur</i>		5 1 3 8 5 7 2	08/11/92	KOSHINO et al.			
<i>ur</i>		5 4 1 8 0 3 0	05/23/95	TOMINAGA et al.			
<i>ur</i>		5 0 7 2 4 2 3	12/10/91	KOSHINO et al.			
<i>ur</i>		6 2 3 2 0 3 5	05/15/01	HIROTSUNE et al.			
<i>ur</i>		6 7 7 0 3 4 6	08/03/04	HARIGAYA et al.			
<i>ur</i>	2002	1 0 1 2 3 0 5	01/31/02	SHINGAI et al.			
<i>ur</i>	2003	1 0 4 3 7 1 2	03/06/03	NAKAMURA et al.			
<i>ur</i>	2003	1 1 2 4 4 5 8	07/03/03	ICHIJI et al.			
<i>ur</i>	2003	1 1 8 0 4 7 3	09/25/03	NISHIHARA et al.			
<i>ur</i>	2003	1 1 9 8 1 7 6	10/23/03	NAGATA et al.			
<i>ur</i>		4 8 6 0 2 7 4	08/22/89	KOBAYASHI			
<i>ur</i>		<del>5 4 1 8 0 3 0</del>	<del>05/23/95</del>	<del>TOMINAGA et al.</del>			
<i>ur</i>		5 6 3 7 3 7 1	06/10/97	TOMINAGA et al.			
<i>ur</i>	2003	1 2 3 2 2 7 8	12/18/03	SHINGAI et al.			
<i>ur</i>	2003	1 2 2 4 2 9 2	12/04/03	SHINGAI et al.			

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
<i>ur</i>		0 2 7 1 6 3 0	06/22/88	E.P.O			
<i>ur</i>		0 3 5 2 1 0 5	01/24/90	E.P.O			
<i>ur</i>		1 1 3 2 9 0 4	09/12/01	E.P.O			
<i>ur</i>		1 1 5 8 5 0 6	11/28/01	E.P.O			
<i>ur</i>		6 - 6 0 4 1 9	03/04/94	JAPAN			
<i>ur</i>	8	- 2 2 4 9 6 1	03/09/96	JAPAN			
<i>ur</i>	2001	- 0 3 9 0 3 1	02/13/01	JAPAN			
<i>ur</i>	62	- 2 4 6 7 8 8	10/27/87	JAPAN			

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

<i>ur</i>	1	English language Abstract of JP 8-224961, Published 03/09/96.
<i>ur</i>	2	English language Abstract of JP 2001-039031, Published 02/13/01.
<i>ur</i>	3	English language Abstract of JP 62-246788, Published 10/27/87.
<i>ur</i>	4	English language Abstract of JP 6-60419, Published 03/04/94.

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<i>u</i>	64 - 0 3 5 7 4 6	02/06/89	JAPAN			
<i>u</i>	63 - 1 5 5 4 3 9	02/06/89	JAPAN			
<i>u</i>	64 - 8 6 3 4 0	06/28/88	JAPAN			
<i>u</i>	02 - 1 6 7 7 9 0	06/28/90	JAPAN			
<i>u</i>	63 - 2 4 4 4 2 2	10/11/88	JAPAN			
<i>u</i>	1 - 2 2 4 9 4 0	09/07/89	JAPAN			
<i>u</i>	2001 - 1 8 9 0 4 2	07/10/01	JAPAN			
<i>u</i>	2002 - 3 4 7 3 4 1	12/04/02	JAPAN			
<i>u</i>	63 - 1 6 7 4 4 0	07/11/88	JAPAN			
<i>u</i>	63 - 1 5 5 4 3 7	06/28/88	JAPAN			
<i>u</i>	60 - 1 7 7 4 4 6	09/11/85	JAPAN			
<i>u</i>	63 - <del>3 3 1 6 6 3</del>	<del>12/29/88</del>	JAPAN			

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<i>u</i>	5	English language Abstract of JP 64-35746, Published 02/06/89.
<i>u</i>	6	English language Abstract of JP63-155439, Published 06/28/88.
<i>u</i>	7	English language Abstract of JP 64-86340, Published 03/31/89.
<i>u</i>	8	English language Abstract of JP 02-167790, Published 06/28/90.
<i>u</i>	9	English language Abstract of JP 63-244422, Published 10/11/88.
<i>u</i>	10	English language Abstract of JP 1-224940, Published 09/07/89.
<i>u</i>	11	English language Abstract of JP 2001-189042, Published 07/10/01.
<i>u</i>	12	English language Abstract of JP 2002-347341, Published 12/04/02.
<i>u</i>	13	English language Abstract of JP63-167440, Published 06/28/88.
<i>u</i>	14	English language Abstract of JP 63-155437, Published 06/28/88.
<i>u</i>	15	English language Abstract of JP 60-177446, Published 09/11/85
<i>u</i>	16	English language Abstract of JP <del>63-331063</del> , Published <del>12/29/88</del> .

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<i>u</i>	64 - 2 5 3 2 8	01/27/89	JAPAN			
<i>u</i>	64 - 2 5 3 2 9	01/17/89	JAPAN			

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

<i>u</i>	17	English language Abstract of JP 64-25328 , Published 01/27/89.
<i>u</i>	18	English language Abstract of JP64-25329 , Published 01/17/89.

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u		5 9 5 8 6 4 9	09/28/99	HIROTSUNE et al.			
u	2001 /	0 0 1 6 2 4 2	08/28/01	MIYAMOTO et al.			

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u	61	- 1 1 5 3 1 7	06/02/86	JAPAN			
u		1 1 8 9 2 1 6	03/20/02	E.P.O.			

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u	1	English Language Abstract of JP 61-115317.

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